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TABLE 2. Results

Total number of cases of primary PCI	180
Acute on chronic total occlusion of infarct related artery	13.88% (25)
Success rate of Primary PCI	80% (144)
Emergency CABG	15% (27)
PCI of donor artery	05% (09)
Acute on chronic total occlusion of IRA%	
RCA	70% (126)
LAD	20% (36)
LCX	10% (18)

achieved success rate was 80% of these PCI cases. The typical presentation of these patients was 12 lead ECG showing acute STEMI in additional to symptoms, biomarkers and 2 D ECHO findings but angiographic findings favours to chronic total occlusion of IRA along with features of acute total thrombotic occlusion. Retrospectively we analysed history of these patients, near about 75% of them had history of effort symptoms. The pathophysiology of these acute on chronic total occlusion may be plaque rupture proximal to the site of CTO and giving rise to thrombotic total occlusion of vessel, ante grade collaterals and micro channels leading to acute STEMI. PCI of these patients is most challenging as compared to cases of chronic total occlusion patients due to associated hemodynamic and electrical instability, additional thrombus burden, blockage of ante grade collateral channels due to thrombus leading to inadequate morphological assessment of vessel. It is associated with lower success rate, more procedural time.

Disclosures:
Dnyanoba Hore: This author has nothing to disclose.
V.Suryaprakasa Rao: This author has nothing to disclose.

A-008

Title: HbA1c is Associated with the Severity of Angiographic Coronary Artery Disease in Chinese Patients with Prediabetic State

Category: Acute Coronary Syndromes, Myocardial Infarction, Thrombectomy and Vulnerable Plaque

Authors: Zhenchi Sang, Shanghai Putuo hospital affiliated with Shanghai University of T. C. M, China; Zongjun Liu, Shanghai Putuo hospital affiliated with Shanghai University of T. C. M, China; Huigen Jin, Shanghai Putuo hospital affiliated with Shanghai University of T. C. M, China; Shizhong Jiang, Shanghai Putuo hospital affiliated with Shanghai University of T. C. M, China; Shizhong Jiang, Shanghai Putuo hospital affiliated with Shanghai University of T. C. M, China

Background: Prediabetes is associated with increased morbidity and mortality rates of coronary artery disease.It is unknown that the relationship of HbA1c and the extent of coronary artery disease. Therefore we investigate the association between HbA1c level and severity of angiographic coronary artery disease in Chinese patients with prediabetic state.

Methods: Consecutive 142 prediabetic patients with angiographic coronary artery disease were divided into three groups: group A, HbA1c $\leqq$ 5.5%; group B, 5.5% $<$ HbA1c $\leqq$ 6.0%; group C, 6.0% $<$ HbA1c $<$ 6.5%; The severity and extent of coronary atherosclerosis were defined as the number of diseased vessels and the Gensini score. Compared with the Gensini score and the number of diseased vessels in three groups. Analysis of the association between HbA1c and the Gensini score.

Results: The number of diseased vessels and the gensini score increased corresponding to increasing HbA1c levels from $\leqq$ 5.5% to 5.6%~6.0% to 6.1%~6.5% ($p < 0.05$). The proportion of triple vessel disease was highest in group C (38% vs. 23% vs. 10%, $p = 0.008$). The gensini score in group C was significantly higher as compared with group A and B (11.52 $\pm$ 7.56 vs. 9.60 $\pm$ 4.92 vs. 6.99 $\pm$ 4.42; $p = 0.002$). HbA1c group was significantly associated with the gensini score (Standardized coefficients. 0.29; $p = 0.001$). Furthermore, HbA1c levels was not associated with the site of the coronary atherosclerosis (proximal or distal involvement) ($p > 0.05$).

Conclusion: HbA1c is an independent risk factor for the severity of angiographic coronary artery disease in Chinese patients with prediabetic state.

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Zongjun Liu: This author has nothing to disclose.
Huigen Jin: This author has nothing to disclose.
Shizhong Jiang: This author has nothing to disclose.
Shizhong Jiang: This author has nothing to disclose.

A-009

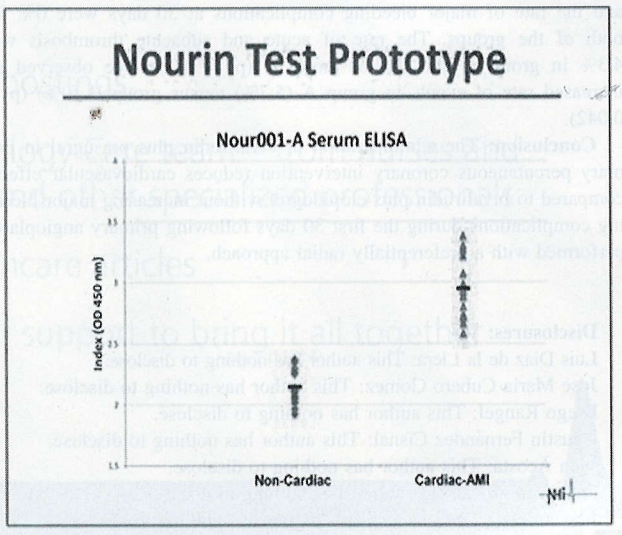
Title: Early Identification of Cardiac Ischemia Patients in the Emergency Department

Category: Acute Coronary Syndromes, Myocardial Infarction, Thrombectomy and Vulnerable Plaque

Authors: Salwa Elgebaly, Nour Heart, Inc., United States; Robert Christenson, University Of Maryland School Of Medicine, United States; Elliott Schiffmann, Nour Heart, Inc., United States; Qiao YI, University of Connecticut School of Medicine, United States; Qiao Yi, University of connecticut School of Medicine, United States; Donald Kreutzer, University of Connecticut School of Medicine, United States

Background: We demonstrated the rapid release of a potent 3 KDa-formyl peptidechemotactic factor (Nourin) by reversible and irreversible ischemic myocardial tissues. Mass spectrometry analysis confirmed that Nourin is a formyl peptide.

Using modified Boyden chambers, we found that Nourin was 3 fold higher in plasmas of ACS patients who presented to the Emergency Department (ED) within 1.5–3.5 hours after the onset of symptoms when compared to normal controls ($P \leq 0.001$). Additionally, three formyl peptide receptor competitive antagonists (soluble receptor fragment, t-Boc-FLFLF and Spinorphin) inhibited chemotactic activity detected in plasmas from heart attack patients by over 50%. We hypothesize that formyl peptides released by ischemic hearts can be used as early biomarkers for myocardial ischemia.



Methods: We developed an ELISA for the cardiac-derived formyl peptide Nourin using antibodies against its f-Met moiety, and determined its levels in serum samples collected from heart attack patients (n = 10) with troponin levels below the clinical decision level and non-cardiac chest pain patients (n = 10 – negative troponin). In a second study, the levels of cardiac Nourin were determined in frozen plasma samples (−70 °C for 3 years) collected from 10 patients with heart attack and unstable angina and non-cardiac chest pain (n = 5). Blood samples in both studies were collected within 8 hours of onset of chest pain.

Results: Figure shows samples from heart attack patients had significantly higher levels of the formyl peptide Nourin ($p < 0.0001$) compared to non-cardiac patients. Similar results were obtained regardless if the blood samples were fresh or frozen (−70 °C for 1 month).

In the second study using frozen plasma samples, we also demonstrated a significant difference between samples collected from patients with heart attack and unstable angina versus non-cardiac patients presenting to the ED with signs and symptoms suggestive of MI ($p = 0.012$).

Conclusion: These data from a limited group of patients show a great promise for the use of cardiac Nourin ELISA for detection of myocardial ischemia/injury.

Disclosures:
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Robert Christenson: 5 Nour Heart, Inc.
Elliott Schiffmann: 5 Nour Heart, Inc.
Qiao YI: This author has nothing to disclose.
Qiao Yi: This author has nothing to disclose.
Donald Kreutzer: This author has nothing to disclose.

A-012

Title: Elevated Serum Fibrinogen in Diabetics, Rather than on-clopidogrel Platelet Reactivity or Systemic Inflammation, Independently Predicts Myocardial Ischemia During Elective Percutaneous Coronary Intervention

Category: Acute Coronary Syndromes, Myocardial Infarction, Thrombectomy and Vulnerable Plaque

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Background: Diabetes is associated with higher fibrinogen, systemic inflammation, platelet reactivity and adverse cardiovascular events. The relative roles of these factors in predicting periprocedural myocardial infarction (PPMI) during percutaneous coronary intervention (PCI) remain unclear.

Methods: Baseline fibrinogen, inflammatory markers and platelet reactivity (VerifyNow P2Y12 assay, Accumetrics, San Diego, CA) were measured in clopidogrel pretreated patients (daily 75 mg ≥7 days or 600 mg loading dose) undergoing elective PCI. Serial cardiac markers of ischemia were measured after PCI. PPMI was defined as any marker >3 × 99% upper limit of normal (ULN)[normal: creatine kinase myocardial band (CK-MB) 0-4.8 ng/ml; troponin I 0-0.5 ng/ml; troponin T 0-0.03 ng/ml].

Results: 205 subjects were prospectively enrolled (age 64.1 ± 11.9 yrs, male 73.2%, chronic clopidogrel 82.3%, diabetes 46.3%). Fibrinogen ≥345 mg/dl best predicted CK-MB defined PPMI per receiver-operator characteristic curve analysis (area 0.73, $p = 0.007$). Diabetics with fibrinogen ≥345 mg/dl had higher CRP > 0.5 mg/dl (43.2% vs 15.8%; $p = 0.003$), platelet count (253.1 ± 64.9 vs 216.3 ± 53.3 10^3 cells/μl; $p = 0.003$), VerifyNow result (253.7 ± 83.8 vs 212.5 ± 92.1 PRU; $p = 0.03$) and lower platelet inhibition (21.4 ± 22.5% vs 36.2 ± 25.3%; $p = 0.02$). There was no association between these factors and fibrinogen in non-diabetics. Higher rate of CKMB PPMI was observed in diabetics with fibrinogen ≥345 mg/dl (16.2% vs 1.7%; $p = 0.013$) but not in non-diabetics (9.8% vs 2.9%; $p = 0.19$) (Figure A). Similar trends for troponin I/T PPMI was observed across fibrinogen groups in diabetics (25.7% vs 11.8%; $p = 0.09$) and non-diabetics (15.2% vs 7.9%; p 0.31) (Figure B). Only fibrinogen ≥345 mg/dl was associated with CK-MB >3 × ULN in diabetics after multiple variable testing (OR 12.1; $p = 0.034$).

Conclusion: Elevated fibrinogen ≥345 mg/dl in diabetics, rather than systemic inflammation and platelet reactivity, independently predicts CK-MB PPMI after clopidogrel pretreatment and elective PCI.

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Sahar Taqui: This author has nothing to disclose.
Lawrence Ang: This author has nothing to disclose.
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Khalid Bin-Thani: This author has nothing to disclose.
Ryan Reeves: This author has nothing to disclose.